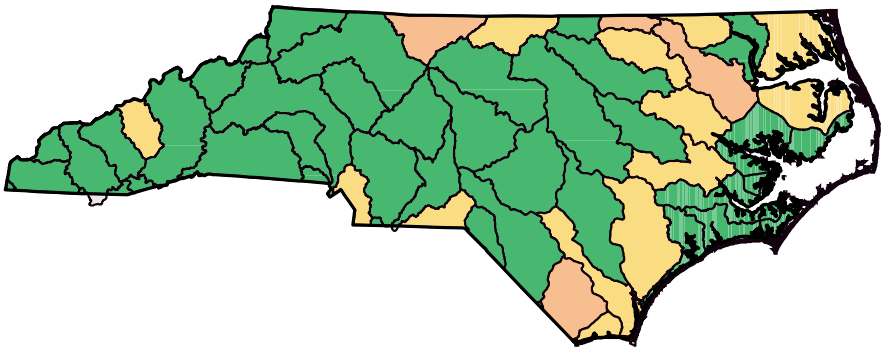
# North Carolina



Percent of Assessed Rivers, Lakes, and Estuaries Meeting All Designated Uses

- 80% - 100% Meeting All Uses
- 50% - 79% Meeting All Uses
- 20% - 49% Meeting All Uses
- 0% - 19% Meeting All Uses
- Insufficient Assessment Coverage
- Basin Boundaries (USGS 8-Digit Hydrologic Unit)

For a copy of the North Carolina 1998 305(b) report, contact:

**Darlene Kucken**
North Carolina Department of Environment and Natural Resources
Division of Water Quality
P.O. Box 29535
Raleigh, NC 27626-0535
(919) 733-5083
e-mail: Darlene.Kucken@ncmail.net

## Surface Water Quality

About 87% of the state's assessed fresh water rivers and streams have good water quality that fully supports designated uses, while 14% are impaired for one or more uses. The major sources of impairment are agriculture, urban runoff, and construction. These sources generate siltation, bacteria, and organic wastes that deplete dissolved oxygen.

Only 2% of the assessed lakes in North Carolina are impaired for aquatic life use. A few lakes are impacted by dioxin, metals, and excessive nutrient enrichment.

About 94% of the estuaries and sounds in North Carolina fully support designated uses. Agriculture, urban runoff, septic tanks, and point source discharges are the leading sources of nutrients, bacteria, and low dissolved oxygen that degrade estuaries.

## Ground Water Quality

About half of the people in North Carolina use ground water as their primary supply of drinking water. Ground water quality is generally good. The leading source of ground water contamination is leaking underground storage tanks, which contaminate ground water with gasoline, diesel fuel, and heating oil. Comprehensive programs are under way to assess potential contamination sites and develop a ground water protection strategy for the state.

## Programs to Restore Water Quality

North Carolina takes a watershed level approach to address water quality problems. In 1998, NC Division of Water Quality (DWQ) completed its first set of basinwide management plans, which summarize water quality and develop strategies for addressing problems for each of 17 river basins. Through the Unified Watershed Assessment process, North Carolina's DWQ identified 23 high-priority watersheds in need of restoration. Within these areas, 11 smaller catchments that are biologically impaired will be studied intensively to identify causes and sources of

pollution and develop strategies to restore aquatic system health.

Addressing nonpoint source pollution continues to be a priority for North Carolina. The DWQ has begun implementing rules that address nitrogen pollution from urban areas, agriculture, and fertilizer application across the entire Neuse River basin. In addition, a temporary rule is being implemented in the Neuse basin that protects riparian buffers adjacent to all perennial and intermittent streams, ponds, lakes, and estuaries. A similar program for the Tar-Pamlico River basin is currently being developed.

## Programs to Assess Water Quality

Surface water quality in North Carolina was primarily evaluated using physical and chemical data collected by the DWQ from a statewide fixed-station network and biological assessments. These include macroinvertebrate (aquatic insect) community surveys, fish community structure analyses, phytoplankton analyses, bioassays, and limnological review of lakes and watersheds. Other sources of information were point source monitoring data, shellfish closure reports, lake trophic state studies, and reports prepared by other local, state, and federal agencies.

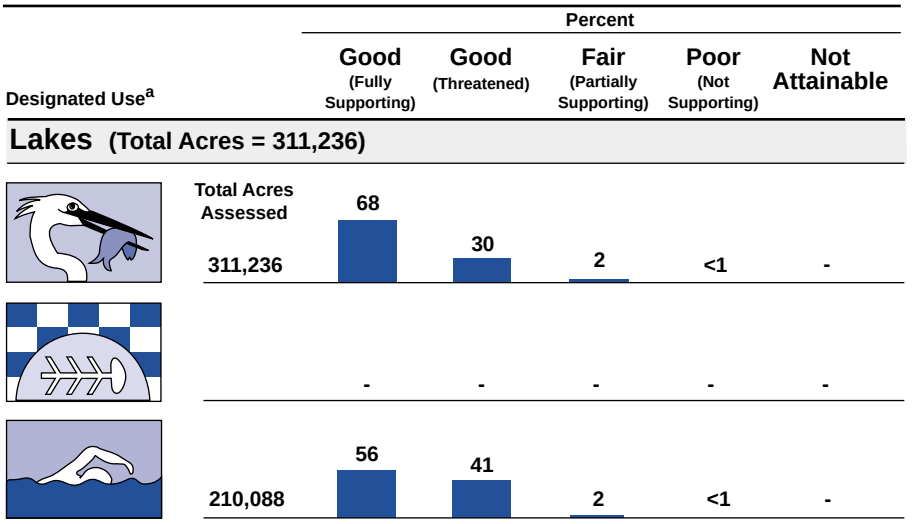
– Not reported in a quantifiable format or unknown.

[a] A subset of North Carolina's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.

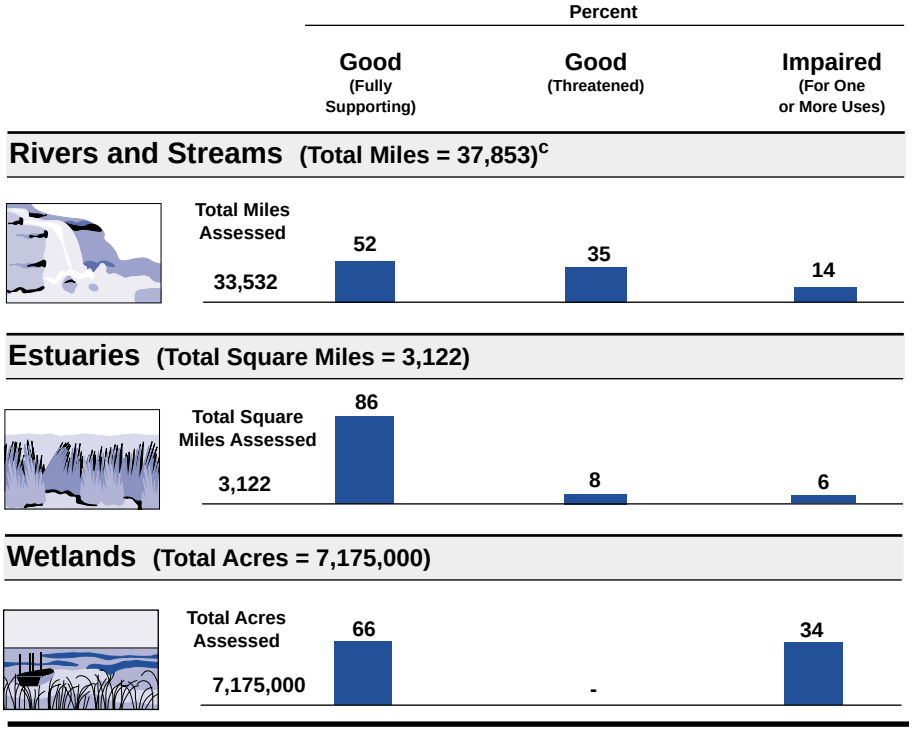
[b] A summary of use support data is presented because North Carolina did not report individual use support in rivers and estuaries in their 1998 Section 305(b) report.

[c] Includes nonperennial streams that dry up and do not flow all year.

## Individual Use Support in North Carolina




## Summary of Use Support[b] in North Carolina




Note: Figures may not add to 100% due to rounding.